Memorandum

Date: November 28, 2000

To: Contractors

From: Lynn A. Hinrichs, Program Director DFCM

Reference: Fountain Green Fish Hatchery
Department of Natural Resources
Division of Wildlife Management
DFCM Project No 97034520

Subject: **Addendum 2**

The following items are incorporated herein as Addendum No. 2:

1. Revised Schedule
2. Specifications
3. Drawings
4. Hydraulic Gates

ADDENDUM ACKNOWLEDGMENT

Bidders shall acknowledge receipt of this addendum by entering the addendum number and date on page 00300-1 of the Bid Forms.

Fountain Green Hatchery
Department of Natural Resources
Division of Wildlife Management
Fountain Green, Utah
DFCM Project No 97034520

Event	Day	Date	Time	Place
Advertisement Placed	Sunday	Nov 5, 2000		Multi-Media
Request for Proposals Available	Monday	Nov 6, 2000	8:00 am	DFCM 4110 State Office Building Salt Lake City, UT 84114
Construction Documents Available (Deposit $200)	Thursday	Nov 9, 2000	8:00 am	Montgomery Watson Salt Lake City, Utah & Boise Offices
Value Based Selection System Training and Criteria Meeting	Monday	Nov 20, 2000	10:00 am – Noon	Kamas Fish Hatchery 2722 E Mirror Lake Hwy Kamas, Utah
Mandatory Registry Meeting (General Contractors, all Critical Subcontractors)	Monday	Nov 20, 2000	1:00pm-3:00pm	Kamas Fish Hatchery 2722 E. Mirror Lake Hwy. Kamas, Utah
General Contractors Turn In References	Monday	Nov 27, 2000	4:00pm	DFCM 4110 State Office Building
Last Day to Submit Questions	Friday	Dec 1, 2000	4:00pm	
Final Addendum Issued	Tuesday	Dec 5, 2000	4:00pm	By Fax or posted on DFCM website: www.dfcm.state.ut.us
Cost Proposals and Subcontractor list Due	Wednesday	Dec 13 2000	Before 4:00pm	DFCM – Sue Smith 4110 State Office Building Salt Lake City, UT 84114
Management Plan and Schedule Due	Thursday	Dec 21, 2000	Before 4:00pm	DFCM – Shae Roberson 4110 State Office Building Salt Lake City, UT 84114
Interviews	Wednesday	Jan 3, 2001	8:00am-5:00pm	DFCM 4112 State Office Building Salt Lake City, UT
Announcement	Friday	Jan 5, 2001	5:00pm	
Intent to issue Notice to Proceed	Monday	Jan 15, 2001		To Be Announced
Project Completion		450 Days		

SPECIFICATIONS

SECTION –02200 – EARTHWORK

Replace paragraph 3.6.A with the following: For excess material that is not cobbles and boulders, the CONTRACTOR place excess excavated material as shown on sheet C-17. The Contractor shall make a waste cobble/boulder pile 100 feet to the southeast of trailer pad T (refer to sheet C-2) and shall dispose of excess cobbles/boulder waste material there.

SECTION - 02598 - LARGE PVC PRESSURE PIPE, RUBBER JOINTS and SECTION 02597 - PVC PRESSURE PIPE, RUBBER JOINTS

The minimum criteria for the pipe wall shall be a DR of 25 or a 165 psig design pressure for C905 pipe and a 100 psig design pressure for C900 pipe. In other words, the pipe DR shall be 25 less.

SECTION –11512 – MICROSCREEN

1. Delete reference to concrete sump in 1.1.A. Microscreen unit is self-contained in its own tank.
2. Control Voltage. Reference 2.1.A.7: Change the control voltage from 120 volt AC to 24 volt DC.
3. Backwash pump. Reference 2.1.C.3: Change word "submersible" to "centrifugal non-clog".

SECTION –15250 – HYDRAULIC GATES

ADD the attached section of 15250 for stop gates and flap gates.

SECTION –16470 – PANELBOARDS AND GENERAL PURPOSE DRY-TYPE TRANSFORMERS

Refer to paragraph 2.3.B.6. Add the words "or equal" so that the last sentence reads as follows: Panelboards shall be as manufactured by General Electric or Cutler-Hammer (Cutler-Hammer) **or equal**."

DRAWINGS

SHEET M-2 – HATCHERY AND OPERATIONS BUILDING MECHANICAL PLAN

Include natural gas piping and associated ancillary pressure reducing and isolation valving. This includes but is not limited to the following: a 2" pipe (materials as shown) coming into the building, pressure reducing valving, 1" piping each to HVU-1, HVU-2, and UH-1.

SHEET GE-4, E-2 AND SPECIFICATION SECTION 16470

Modify GE-4 detail E-902, E-2 and Specification Section 16470 2.2 B 2 "Enclosures" page 16470-3 as follows:

1. Change the transformer enclosures and housings for transformers P, A, BC, T1 and T2 to standard transformer painted steel NEMA 3R weatherproof outdoor housings. Provide enclosure for pad or pedestal mounting as indicated in the contract documents.
2. Furnish, install and connect indicated circuit breakers in separate lockable NEMA 3R 316SS lockable panels with pedestal supports so the operating handle is about 54" above the walking surface in front of the circuit breaker.
3. Contractor shall furnish, install and connect a pedestal foundation for the circuit breaker panels matching the transformer foundation support. For the pad mounted transformers the foundation for the circuit breaker panels shall be a steel reinforced concrete equipment pad detail E-403 sheet GE-3 and the installation shall be similar to detail E-406 sheet GE-3. For the pedestal (TRAILER RISER) mounted transformers the foundation for the circuit breaker panels shall be a circular steel reinforced concrete foundation and the installation shall be similar to detail E-902 sheet GE-4. A common steel reinforced concrete equipment pad or a common steel reinforced concrete circular foundation is acceptable for use by the transformer and associated circuit breakers together.
4. Contractor shall furnish, install and connect conduit and wire sizes and numbers to comply with the NEC between the circuit breakers and transformers as a minimum. If the contract documents indicate a larger conduit and wire size to the transformers exceeding NEC requirements that larger conduit and wire size shall be provided between the circuit breakers and transformers to reduce voltage drop and sag problems.
5. A common painted steel oversized lockable NEMA 3R enclosure for transformer and circuit breakers together per the NEC in one single enclosure as indicated in the drawings is an acceptable alternative to separate enclosures as described in items 1 through 4 above and shall be pad or pedestal mounted as indicated in the drawings.

SHEET E-5 – LIGHTING FIXTURE SCHEDULE AND HVAC CONTROLS

Delete the motion control requirement for fixtures B and E on the fixture schedule.

SECTION 15250 - HYDRAULIC GATES

PART 1 -- GENERAL

1.1 THE REQUIREMENT

A. The CONTRACTOR shall provide hydraulic gates with appurtenances, complete and operable, in accordance with the Contract Documents.

B. The provisions of this Section shall apply to all flap gates, slide gates, stop gates, sluice gates, and shear gates, except where otherwise indicated in the Contract Documents.

C. The requirements of Section 11000 - Equipment, General apply to this Section.

D. The requirements of Section 15201 - Valve and Gate Actuators apply to this Section.

E. The CONTRACTOR shall assign to a single manufacturer responsibility for furnishing and functional operation of the hydraulic gates including operators and accessories. The designated single manufacturer, however, need not manufacture more than one part of the units but shall coordinate the design, assembly, testing, and installation of the units.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Commercial Standards:

AWWA C501	Cast Iron Sluice Gates
AWWA C 513	Open Channel Fabricated Metal Slide Gates
ASTM A 276	Stainless Steel Bars and Shapes
ASTM B 21	Naval Brass Rod, Bar, and Shapes
ASTM B 584	Copper Alloy Sand Castings for General Applications

1.3 CONTRACTOR SUBMITTALS

A. **General**: Furnish submittals in accordance with Section 01300 - Contractor Submittals.

B. **Shop Drawings:** Shop Drawings of all hydraulic gates.

C. **Technical Manuals:** Complete technical manuals, including printed instructions for proper maintenance, lubrication, and complete parts list indicating the various parts by name, number, and exploded view where necessary. A list of recommended spare parts for the OWNER to store at the facility shall be included

D. **Certification:** The CONTRACTOR shall obtain written certification from the designated single manufacturer, addressed to the OWNER, stating that the equipment will efficiently and thoroughly perform the required functions in accordance with these Contract Documents, and that the designated single manufacturer accepts the CONTRACTOR's assignment of responsibility for coordination of gate equipment, including operators, controls, and services required for proper installation and operation. The CONTRACTOR shall submit all such certificates to the ENGINEER.

E. **Field Procedures:** Instructions for field procedures for installation, adjustments, inspection, and testing shall be provided prior to installation of the gates.

1.4 QUALITY ASSURANCE

A. **Equipment Field Testing:** The CONTRACTOR shall be responsible for the coordination of the tests of each hydraulic gate in the presence of the manufacturer's factory service representative. Excessive leaks shall be corrected and the equipment retested until found satisfactory.

1.5 MANUFACTURER'S SERVICE REPRESENTATIVE

A. **Installation and Startup Assistance:** Service and testing assistance by the manufacturer's engineering representative for each gate and valve shall be furnished by the CONTRACTOR during installation and startup.

B. **Instruction of OWNER's Personnel:** The CONTRACTOR shall arrange for the services of a factory service representative to instruct the OWNER's personnel in the operation and maintenance of the equipment.

1.6 SPECIAL WARRANTY REQUIREMENT

A. The CONTRACTOR shall furnish the manufacturer's written guarantee that the hydraulic gates comply with these specifications. The CONTRACTOR shall also furnish the manufacturer's warranties as published in its literature.

PART 2 -- PRODUCTS

2.1 GENERAL

A. All equipment provided under this Section shall be new, of current manufacture, and shall be the products of reputable manufacturers specializing in the manufacture of such products and which have had previous experience in such manufacture. The CONTRACTOR shall, upon request,

furnish the names of not less than 5 successful installations of the manufacturer's equipment of comparable nature to that offered under this contract.

B. All combinations of manufactured equipment which are provided under these Specifications shall be entirely compatible, and the CONTRACTOR and the manufacturer shall be responsible for the compatible and successful operation of the various components of the units. All necessary mountings and appurtenances shall be included.

C. **Materials.** Materials employed in the manufacture and installation of the hydraulic gates and operators shall be suitable for the intended application. Material not specifically called for shall be high-grade, standard commercial quality, free from defects and imperfection that might affect the serviceability of the product for the purpose for which it is intended.

D. **Hardware:** Bolts and nuts shall comply with Section 05500 - Miscellaneous Metalwork.

E. **Protective Coating:** Coat ferrous metal in accordance with Section 09800 - Protective Coating

F. **Tools And Spare Parts:**

1. Tools: Furnish special tools necessary for maintenance and repair of the gates. Such tools shall be suitably stored in metal toolboxes and identified with the equipment number by means of stainless steel or solid plastic nametags attached to the box.

2. Spare Parts: Furnish the following spare parts in a box as described above for tools, for air or hydraulic actuated gates for each type and size of gate:

   a. One set of directional valves, solenoid or pilot actuated

   b. One set of cylinder actuator seals

   c. One set of filters

   d. One repair kit for the hydraulic pump, containing seals or packing, gaskets, and O-rings.

1.2 ALUMINUM STOP GATES

A. **Construction:** Hand-lift stop gates with handles shall be fabricated of aluminum as indicated and shall be reinforced as necessary to assure long life under the indicated operating conditions. Gates shall be provided with "J" bulb type neoprene seals. Calculations, and detail drawings, as necessary, shall show the method of fabrication and verify that the plates will withstand any normal pressures or forces exerted without buckling or otherwise being damaged. Mounting hardware, if required, shall be of Type 316 stainless steel.

B. Manufacturers, or Equal

1. F.B. Leopold Co. (Division of Sybron Corp.)

2. Washington Aluminum Co., Inc.

3. Waterman Industries, Inc.

2.3 FLAP GATES

A. **Design:** Flap gates and frames shall be of cast iron construction, with fully-adjustable top pivot points and bronze sealing surfaces. Gate frames shall have flat backs for attachment to wall thimbles, unless otherwise indicated.

B. **Wall Thimbles:** Unless otherwise shown, flap gates shall be mounted against cast iron wall thimbles with Type 316 stainless steel bolts, anchor bolts, nuts, and washers, and sealant or gaskets. The thimbles shall be of the F-pattern type, to match the thickness of the walls in which they are installed. Wall thimbles shall be furnished by the manufacturer of the gates, to match the bolt dimensions of the gates.

C. **Sealant:** The elastomeric sealant shall be **Rubber Caulk Sealer** as manufactured by **Products Research Company,** Los Angeles**;** or equal**.**

D. **Grout:** Gates mounted against concrete walls without wall thimbles shall be installed with one-inch thick non-shrink grout between the wall and the gate flange.

E. **Manufacturers or Equal:**

1. Hydro Gate Corp., Model 20C or 10C for round openings;

2. Rodney Hunt Company, Series FV-AC.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Sluice and shear gates shall be installed in strict accordance with the manufacturer's printed recommendations and the requirements herein. Operators shall be located to avoid interference with handrails and structural members.

B. Shortly before setting each gate, a 1/8-inch thick layer of mastic grade polysulfide elastomeric sealant shall be applied to the back of the gate frame. After setting the gate, the nuts shall be turned down on the anchor bolts just far enough to make them snug and to cause the rubber sealant to begin to ooze out, but not far enough to produce any significant stress to the frame. Excess sealant at the edges shall be removed. The sealant shall be allowed to cure for at least 7 days, after which the anchor bolt nuts shall be tightened to their final positions. If gaskets are being used, they shall be installed over the studs in one piece, or dovetailed and cemented with a liquid-type gasket material.

C. Damage to surface coatings incurred during shipment and/or installation shall be repaired to the satisfaction of the ENGINEER prior to installation.